

Title (en)  
LASER MACHINING DEVICE

Title (de)  
LASERBEARBEITUNGSVORRICHTUNG

Title (fr)  
DISPOSITIF D'USINAGE AU LASER

Publication  
**EP 3834978 B1 20231220 (EN)**

Application  
**EP 19847196 A 20190227**

Priority  
• JP 2018148541 A 20180807  
• JP 2019007600 W 20190227

Abstract (en)  
[origin: EP3834978A1] A first detector 31 detects an output of a reflected beam from an exit end surface of a first parallel plate 25. A determination unit 16 determines that an abnormality occurs in the first parallel plate 25 when the detection value of the first detector 31 is smaller than a predetermined determination threshold.

IPC 8 full level  
**G02B 7/10** (2021.01); **B23K 26/046** (2014.01); **B23K 26/06** (2014.01); **B23K 26/064** (2014.01); **B23K 26/70** (2014.01); **G02B 7/28** (2021.01); **G02B 27/14** (2006.01)

CPC (source: EP US)  
**B23K 26/046** (2013.01 - EP); **B23K 26/064** (2015.10 - EP); **B23K 26/0648** (2013.01 - EP US); **B23K 26/082** (2015.10 - US); **B23K 26/38** (2013.01 - US); **B23K 26/705** (2015.10 - EP US); **B23K 26/707** (2015.10 - EP US); **G02B 7/102** (2013.01 - EP); **G02B 7/28** (2013.01 - EP); **G02B 27/14** (2013.01 - EP)

Cited by  
WO2023036985A3

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**EP 3834978 A1 20210616**; **EP 3834978 A4 20211103**; **EP 3834978 B1 20231220**; JP 7126223 B2 20220826; JP WO2020031406 A1 20210812; US 11806812 B2 20231107; US 2021146481 A1 20210520; WO 2020031406 A1 20200213

DOCDB simple family (application)  
**EP 19847196 A 20190227**; JP 2019007600 W 20190227; JP 2020535489 A 20190227; US 202117162510 A 20210129